Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems	)	PR Docket No. 93-61

To: The Commission

REPLY COMMENTS OF ADEMCO

The Alarm Device Manufacturing Company ("ADEMCO"), a division of Pittway Corporation, by its attorneys, hereby submits these Reply Comments in response to the Public Notice released in the above-captioned proceeding on February 9, 1994. The Public Notice requested comments on ex parte submissions made in this proceeding by PacTel Teletrac ("PacTel"), MobileVision and other parties regarding the Commission's proposal to create a new Location Monitoring Service ("LMS").[1/]

I. INTRODUCTION

The proponents of wideband LMS have sought to sweep under the rug a question of fact which the FCC must resolve in deciding whether to establish the new service. The question is: Will co-channel Part 15 devices cause harmful interference to wideband LMS licensees? The Commission must answer this question since it has

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1/ On March 18, 1994, the Commission released an Order (DA 94-242) which extended the date by which reply comments must be filed to March 29, 1994.

proposed to give new LMS licensees the benefit of Section 15.5(b) of the agency's rules which requires that Part 15 devices which interfere with LMS transmitters must cease operations.

Throughout this proceeding, wideband LMS proponents have tried to ignore or sidestep this important question; when they have addressed it, they have done so in a most disingenuous manner. For example, PacTel's discussion of this issue in Reply Comments filed last year, was limited to a single, conclusory sentence that wideband LMS would not have "any appreciable adverse effect on Part 15 operators. . . ."[2/] Knowing that an honest debate would reveal the legitimacy and seriousness of the Part 15 industry's concerns, wideband LMS proponents have, thus far, failed to submit any definitive engineering evidence to help the FCC answer this question. Indeed, last year PacTel flatly refused to cooperate with the Telecommunications Industry Association in an engineering test program that was intended to determine precisely the circumstances in which Part 15 devices would interfere with LMS.

This Machiavellian effort by LMS proponents to obfuscate and stonewall has finally ended. A new technical study submitted by wideband LMS advocate MobileVision confirms, on its face, that the concerns articulated by the Part 15 industry are real and serious. It is now absolutely clear that if the FCC establishes LMS, tens of

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[2/] Pactel Reply Comments at 45 (July 29, 1993). Pactel was equally flip in its initial comments, making only the conclusory assertion that "[t]otal system failures are not likely to occur due to interference from [Part 15] users. . . ." Pactel Comments at 52 (June 29, 1993). Even if it were true, this statement is misleading because Section 15.5(b) would give PacTel the legal right to demand cessation of operation of a Part 15 device that interferes with reception from a single LMS transmitter; it does not limit PacTel's right to demand a shutdown only of those Part 15 devices that cause "total system failures".

thousands of individuals and businesses may be forced to discontinue operating Part 15 devices in the 902-928 MHz band. The multi-billion dollar investment made by industry and consumers in cordless phones, energy monitoring equipment, security systems, and scores of other Part 15 devices could be destroyed.

The FCC may not lawfully ignore this problem. Instead, it must acknowledge in its Report and Order that Part 15 devices will cause interference to wideband LMS. And, if the FCC decides to let wideband LMS licensees use Section 15.5(b) to force owners of Part 15 devices to discontinue operation, the Commission must articulate its rationale for such a decision.

II. DISCUSSION

In a belated display of candor, on March 15, 1994, MobileVision submitted a 42-page technical analysis which demonstrates, on its face, that Part 15 devices will interfere with wideband LMS systems.[3/] The MobileVision study shows that a Part 15 device operating indoors with just 0.1 watt of power -- such as a cordless phone -- could cause harmful interference to an LMS fixed site receiver unless the cordless phone was more than 1.62 miles from the LMS receiver.[4/]

[3/] In comments filed on that same day, ADEMCO summarized three other engineering studies submitted in this proceeding that reach this same conclusion. See Comments of Ademco at 6-8 (March 15, 1994). By contrast, the record contains no engineering study which concludes that interference from Part 15 devices to wideband LMS will be insubstantial. Id. at 8.

[4/] G.K. Smith, "Interf. Analysis of Part 15 Devices and LMS Wideband Systems" at 10, att. as Annex 2 to Further Comments of MobileVision (March 15, 1994).

The study also shows that the risk of interference to LMS by Part 15 equipment operating outdoors is even greater. For example, a Part 15 transmitter operating outdoors with one watt of power would have to be at least 11.48 miles from an LMS fixed site receiver in order to avoid causing interference to that receiver.[5/] A Part 15 device operating outdoors at 0.1 watt would have to be at least 6.46 miles from a fixed LMS receiver in order to avoid interference.[6/] And, a 1 watt Part 15 transmitter operating outdoors would have to be more than 0.93 miles from a mobile LMS receiver communicating with an LMS base station six miles away to avoid interfering with that LMS mobile receiver.[7/] With more than 2 million 902-928 MHz Part 15 devices already operating in a country containing roughly 3 million square miles (a mean separation of only 1.5 miles between individual devices), it does not take a sophisticated mathematician to conclude that interference from Part 15 devices to wideband LMS systems will cause widespread and serious problems.[8/]

MobileVision and PacTel have presented three proposals in their supplemental comments which they claim will minimize the

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[5/] Id. at 22.

[6/] Id.

[7/] Id. at 26.

[8/] NTIA recently estimated that more than two million Part 15 devices presently operate in the 902-928 MHz band. See, U.S. Dept. of Commerce, "Prelim. Spectrum Realloc. Report" at 3-12 (NTIA Special Pub. 94-27, Feb. 1994). Moreover, sales of one popular Part 15 consumer device, cordless phones, are booming. Approximately, 4,000,000 cordless phones were sold during 1992; 9,000,000 were sold in 1993. See Statement of Reed Hundt, Chairman, FCC, before the Committee on Commerce, Science and Transportation, U.S. Senate at 6 (February 23, 1994).

number of forced Part 15 shutdowns. As shown below, none of these proposals are truly effective, and two of them would present the FCC with an enforcement nightmare.

First, MobileVision and Pactel offer to compromise by confining their wideband LMS operations to a discrete portion of the 902-928 MHz band. This, they say, would leave Part 15 users free to operate on the remaining part of the band where they would be immune from forced shutdown under Section 15.5(b). This proposal is a sham. It does nothing to help owners of existing Part 15 devices who would be forced to terminate operations. Millions of such devices currently occupy the entire 902-928 MHz band, and few of them can be retuned to avoid operating on that portion of the band that would be occupied by wideband LMS systems. Moreover, the proposal would result in a de facto reallocation of the band away from the Part 15 industry because Part 15 manufacturers would be forced, almost immediately, to cease producing devices which would be required to operate in only about half of the of the spectrum where they presently operate.[9/]

MobileVision's second proposal is that wideband LMS licensees "defray . . . reasonable costs of migration" for tens of thousands of existing Part 15 users who could be forced to discontinue operating their equipment pursuant to Section 15.5(b).[10/] This

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[9/] See Comments of ADEMCO at 10-11 (March 15, 1994); "MobileVision's Interf. Analysis of Part 15 Devices", supra, at 37-38. It should be noted that MobileVision's band splitting plan would be less devastating to ADEMCO than PacTel's plan because all of ADEMCO's existing Part 15 transmitters operate on frequencies that are entirely within the band that would be off limits to wideband LMS.

[10/] Further Comments of MobileVision at 31 (March 15, 1994).

proposal does nothing to ameliorate the substantial hardship that could befall users and manufacturers of Part 15 equipment.[11/] At best, it would result in compensation for existing Part 15 owners whose equipment is confiscated. However, on its face, it does nothing to compensate numerous business users who have made a substantial investment in Part 15 systems and who would be precluded from expanding those systems since the equipment they need no longer would be manufactured. It also does nothing to compensate Part 15 manufacturers whose businesses could be seriously harmed. Moreover, enforcing this type of rule would create an administrative nightmare because the FCC almost certainly would be called upon to decide whether individual compensation offers by wideband LMS licensees to potentially thousands of Part 15 users are "reasonable".

Finally, Pactel suggests adoption of a rule stating that a Part 15 device interfering with an LMS receiver would be required to cease operating pursuant to Section 15.5(b) only if the device transmits more than six seconds per minute.[12/] Adoption of such a rule certainly could be helpful for manufacturers and users of low duty cycle devices (e.g., security system, HVAC control systems, etc.) which typically operate with a duty cycle substantially less

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[11/] Further Comments of MobileVision at 31 (March 15, 1994).

[12/] The rule proposed by Pactel would read as follows: "A Part 15 device will be considered a source of harmful interference if the signal level from that device exceeds the average interference and noise floor at an LMS receiver by more than 10 dB for more than 20% of the time over any 60 second period (10% if the signal exceeds the 10 dB limit at more than one LMS receiver)". Supplemental Comments of Pactel at 10 (March 15, 1994).

tially less than six seconds per minute.[13/] However, it does nothing to prevent mandatory shutdown for numerous other devices that operate at more than six seconds per minute. Moreover, it would be very difficult to enforce such a rule. The FCC undoubtedly would be asked to decide, in numerous cases, whether a particular Part 15 device must cease operation for exceeding the maximum allowable signal strength at an LMS receiver based on conflicting signal strength data presented by the wideband LMS licensee and the Part 15 owner.

III. CONCLUSION

ADEMCO urges the Commission to abandon its proposal to establish LMS. If the Commission decides to authorize LMS, it cannot lawfully sidestep the factual question of whether Part 15 devices will interfere with wideband LMS systems.

If the Commission concludes, as it must, that Part 15 devices will interfere with wideband LMS systems, it must make one of two policy choices. Either the Commission must acknowledge that it does not care about how its actions in this proceeding will affect the Part 15 industry, or it must adopt rules which ensure that newly authorized wideband LMS operators cannot exercise traditional preemptive rights over Part 15 devices which operate in the 902-928

[13/] Significantly, the rule would only be helpful if it is clarified in two respects. First, harmful interference should only be found to exist under the rule when the signal strength of a single Part 15 transmitter, rather than an arbitrary grouping or system of transmitters, exceeds the threshold specified in the rule. Second, the Commission must clarify that the rule is applicable only to Part 15 transmitters whose duty cycles typically exceed the duty cycle threshold specified in the rule rather than to transmitters whose duty cycles occasionally exceed the threshold.

MHz band. In view of the significant investment and efficient use of the 902-928 MHz band by the Part 15 industry, ADEMCO submits that the only rational and legally justifiable choice is for the Commission to adopt the latter approach and to issue a Report and Order which states that Section 15.5(b) will not apply if wideband LMS systems encounter harmful interference from Part 15 devices.

Respectfully submitted,

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